

Work Order ID 94143

94143

Page 1

November-30-12 9:29:04 AM

Item ID: D412-698-027

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bracket Assembly, LH (Aluminum Doors)

Start Date: 11/30/12 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 12/07/12 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: MLS Date: 12-12-03 Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI 9484	C								
100		0.00							
100									
DC		0.00							
Document Control	Memo								
	Photocopy bluefile & type labels per PPP D412-698-027/ DSI9484								
	CHG003								
110	Pick Kit	0.00							
110									
Packaging		0.00							
Packaging	Memo								
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC		0.00							
Quality Control	Memo								

1 J. J. H. M. S. 13-2-4

13/2/12

13-02-04

1

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 94143

94143

Page 2

November-30-12 9:29:04 AM

Item ID: D412-698-027

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bracket Assembly, LH (Aluminum Doors)

Start Date: 11/30/12 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 12/07/12 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00				1		36/22	DAS 06 9-83
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D412-698-027/ DSI 9484								
	Location: <u>FG/DS</u>								
	PPP rev: <u>A</u>								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

13/2/25

RB-0222

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other: <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabelled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Picklist Print

November-30-12 9:29:03 AM

Page 1

Work Order ID: 94143

Parent Item: D412-698-027

Start Date: 11/30/12

Required Date: 12/07/12

Parent Item Name: Bracket Assembly, LH (Aluminum Doors)

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP RevA: new issue DD 09.11.30 verified by:EC
ECN11-531 verified by:EC

IPP Rev:B 11.03.31 AS PER

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D31993

Bracket, Fwd LH

Manufactured

No

110

Each

22.0000

1

1

SP13-02-04

Shp

Location

Loc Qty

Loc Code

ST236B

22

75206

5

77361

17

1X

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
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Equip/Tooling <input type="checkbox"/>											
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FAULT CATEGORY											
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DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D412-698 REV. E OR LATER APPROVED REVISION
AND ICA-D412-698 REV. 5 OR LATER APPROVED REVISION

REF. TCCA STC: SH92-43

REF. FAA STC: SR01446NY

REF. EASA.IM.R.S.00709

Field experience has shown that the forward D3199-1 brackets that are part of the D412-698-011/-012/-017 Cabin Door Roller Kits and forward D3675-1 brackets that are part of the D412-698-031/-032/-033 Cabin Door Roller Kits may wear prematurely if the aircraft is flown a significant amount of time with the sliding doors open. Dart has developed the D412-698-027/-028 kits that includes a longer D3199-3/-4 bracket for installation in the first forward position of the D412-698-011/-012/-017 kits to reduce wear on these forward brackets on aircraft equipped with aluminum doors. Likewise, Dart has developed the D412-698-037/-038 kits that includes a longer D3675-5/-6 bracket for installation in the first forward position of the D412-698-031/-032/-033 kits to reduce wear on these forward brackets on aircraft equipped with composite doors.

The D412-698-027/-028/-037/-038 kits may be installed as follows:

- 1) Remove the sliding door from the aircraft per Section 52.1 of ICA-D412-698
- 2) Remove the first forward D3199-1 or D3675-1 brackets as applicable.
- 3) Install the D3199-3/-4 or D3675-5/-6 bracket as applicable in lieu of the removed -1 bracket.
Refer to Figure 1 Sheet 2 (aluminum doors) or Figure 2 Sheet 3 (composite doors).
- 4) Torque hardware per ICA-D412-698.
- 5) Re-install sliding door on aircraft per Section 52.2/52.3 of ICA-D412-698 as applicable.
- 6) Make entry in technical records of aircraft indicating that DSI 9484 has been completed.

PARTS LIST

QTY. -027	QTY. -028	QTY. -037	QTY. -038	PART NUMBER	DESCRIPTION
X				D412-698-027	BRACKET KIT, LH (ALUMINUM DOORS)
	X			D412-698-028	BRACKET KIT, RH (ALUMINUM DOORS)
		X		D412-698-037	BRACKET KIT, LH (COMPOSITE DOORS)
			X	D412-698-038	BRACKET KIT, RH (COMPOSITE DOORS)
1				D3199-3	FORWARD BRACKET, LH
	1			D3199-4	FORWARD BRACKET, RH
		1		D3675-5	FORWARD BRACKET, LH
			1	D3675-6	FORWARD BRACKET, RH

WEIGHT AND BALANCE

Installation	Weight	Lateral		Longitudinal		Applicability
		Arm	Moment	Arm	Moment	
D412-698-027 Bracket Kit	0.16 lb 0.07 kg	-48.0 in -1.22 m	-7.68 in-lb -0.09 m-kG	102.3 in 2.60 m	16.37 in-lb 0.18 m-kG	Aircraft Equipped with P/N 205-032-669-XXX Aluminum Doors
D412-698-028 Bracket Kit	0.16 lbs 0.07 kg	+48.0 +1.22 m	+7.68 in-lb +0.09 m-kG	102.3 in 2.60 m	16.37 in-lb 0.18 m-kG	
D412-698-037 Bracket Kit	0.18 lb 0.08 kg	-48.0 in -1.22 m	-8.64 in-lb -0.10 m-kG	102.3 in 2.60 m	18.41 in-lb 0.21 m-kG	Aircraft Equipped with P/N 412-030-300-XXX Composite Doors
D412-698-038 Bracket Kit	0.18 lb 0.08 kg	+48.0 in +1.22 m	+8.64 in-lb +0.10 m-kG	102.3 in 2.60 m	18.41 in-lb 0.21 m-kG	

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO #01-Q-01

APPROVED

BY: [Signature]
D. SHEPHERD (DE #02)

DATE: 11.03.21
CERT. NO.: SH92-43
ISSUE NO.: 5

C	UPDATED -027/-028/-037/-038 KITS AND INSTALLATION	MB	11.03.21
B	ADDED -037/-038 KIT FOR COMPOSITE DOORS; UPDATED TITLE ACCORDINGLY.	MB	10.12.17
A	NEW ISSUE	<u>[Signature]</u>	09.10.16
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>[Signature]</u>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<u>[Signature]</u>		
CHECKED	<u>[Signature]</u>	DRAWING NO.	REV. C
MFG. APPR.	<u>[Signature]</u>	DSI 9484	SHEET 1 OF 3
APPROVED	<u>[Signature]</u>	TITLE	SCALE
DE APPR.	<u>[Signature]</u>	D412-698-027/-028/-037/-038 Kits	NTS
DATE	11.03.21	COPYRIGHT © 2009 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

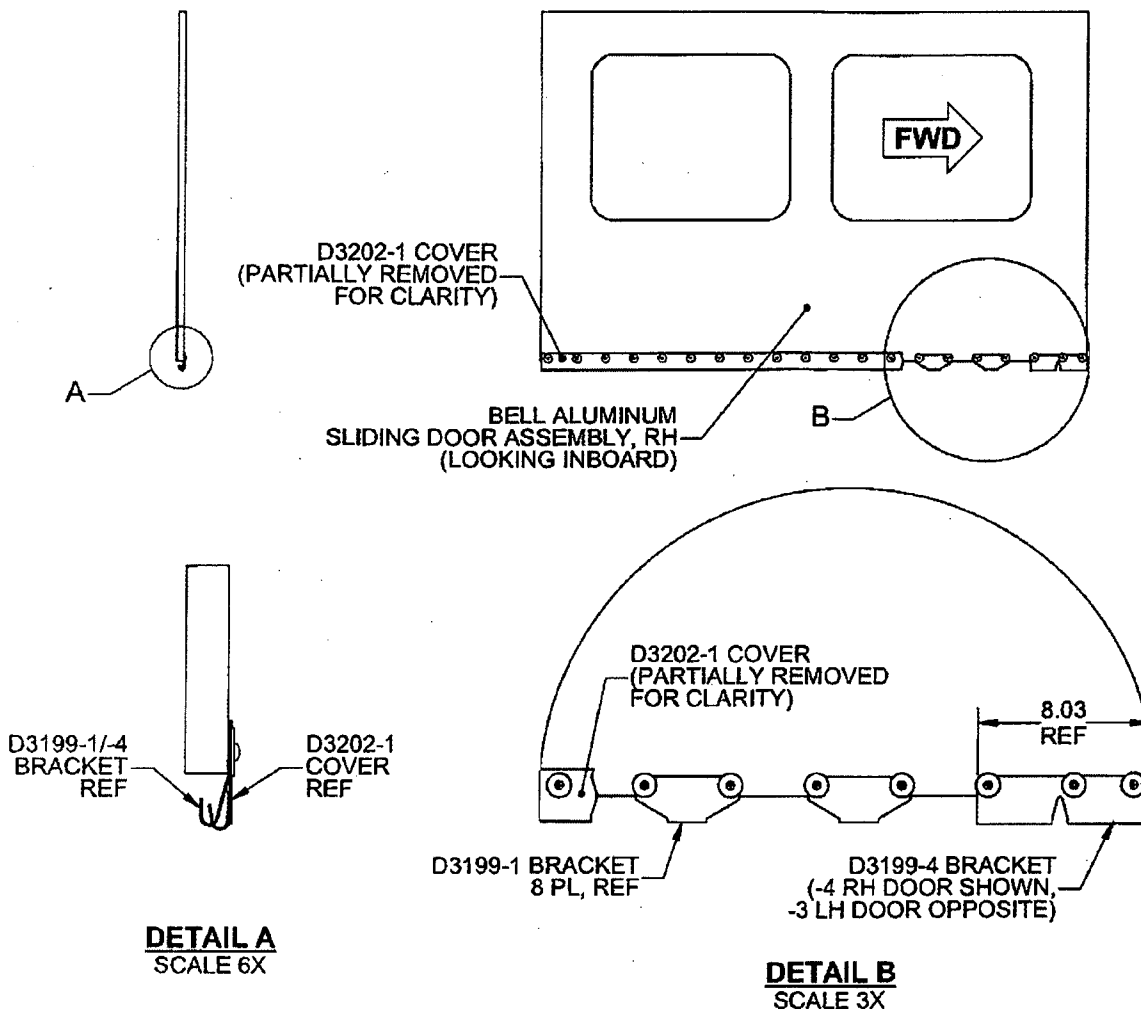






FIGURE 1: D3199-3/-4 BRACKET INSTALLATION ON ALUMINUM DOORS
(-4 SHOWN, -3 OPPOSITE)

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 11.03.21
CERT. NO.: SH92-43
ISSUE NO.: 5

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	N/A	DSI 9484	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		D412-698-027/-028/-037/-038 Kits	NTS
DATE	11.03.21	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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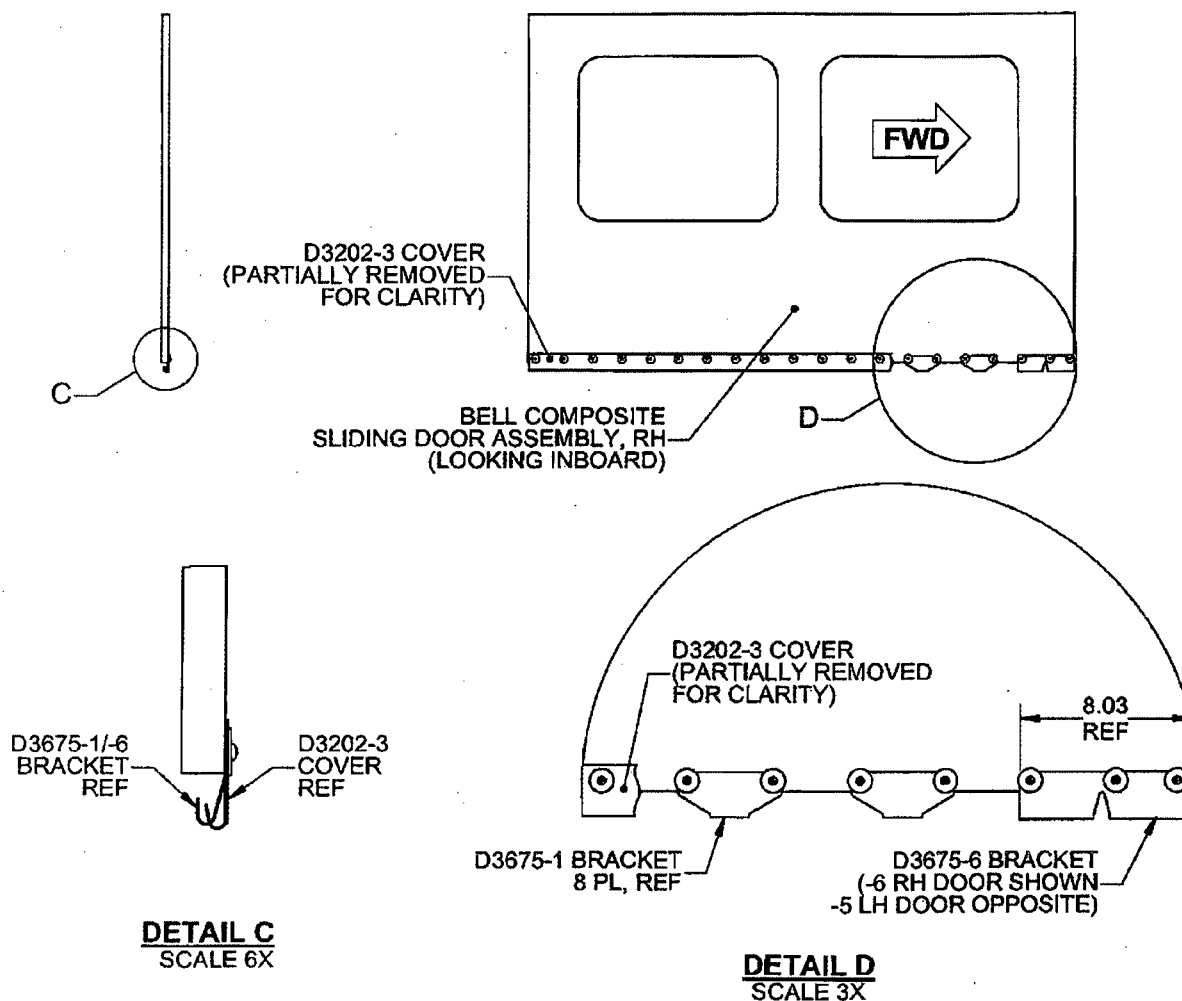


FIGURE 2: D3675-5/-6 BRACKET INSTALLATION ON COMPOSITE DOORS
(-6 SHOWN, -5 OPPOSITE)

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 11.03.21
CERT. NO.: SH92-43
ISSUE NO.: 5

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>ASS</i>	DRAWING NO. DSI 9484	REV. C
MFG. APPR.	<i>N/A</i>		SHEET 3 OF 3
APPROVED	<i>[Signature]</i>	TITLE D412-698-027/-028/-037/-038 Kits	SCALE NTS
DE APPR.	<i>[Signature]</i>		
DATE	11.03.21	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

9/11/23